DATE

CERTIFIED MAIL **DRAFT**

Ms. Holly Harwood
PacifiCorp
825 NE Multnomah
Portland, OR 97232

Dear Ms Harwood:

RE: Yale Hydroelectric Project (FERC No. 2071)
401 Certification / Order No. ____

We have reviewed PacifiCorp's request for certification under Section 401 of the Federal Water Pollution Control Act (Clean Water Act 33 U.S.C. § 1341) for the licensing of the Yale Hydroelectric Project (FERC No. 2071) in Clark and Cowlitz Counties, Washington. On behalf of the State of Washington, the Department of Ecology (Ecology) certifies that reasonable assurance exists that the project will comply with applicable provisions of 33 U.S.C. §§ 1311, 1312, 1313, 1316, 1317, and other appropriate requirements of State law; subject to and limited by the conditions stated by the enclosed Certification-Order.

This Certification-Order shall be deemed withdrawn if the Federal Energy Regulatory Commission does not issue a license for the project within five (5) years of the date of this issuance of this Certification-Order. This Certification-Order may be modified or withdrawn by Ecology prior to the issuance of the license based upon new information or changes to the water quality standards or appropriate requirements of state law. If the Certification-Order is withdrawn, PacifiCorp will then be required to reapply for state certification under Section 401 of the Clean Water Act.

If you have any questions, please contact Chris Maynard at (360) 407-6484. Written comments and correspondence relating to this document should be directed to Kelly Susewind, Water Quality Program, Department of Ecology, Southwest Regional Office, P.O. Box 47600, Olympia, WA 98504. The enclosed Certification-Order may be appealed by following the procedures described in the Certification-Order.

Sincerely,

Kelly Susewind
Water Quality Section Manager
Southwest Regional Office
Washington State Department of Ecology

KS:CM:lmc
Enclosure

cc: Magalie Roman Salas, FERC Secretary
Jon Cofrancesco, FERC Project Lead
FERC Service List for P-2071
Dick Wallace, Department of Ecology, SWRO Regional Director
Chris Maynard, Department of Ecology, Water Quality Program, SWRO
Kim VanZwalenburg, Department of Ecology, Environmental Shoreline Planner
Loree Randall, Shorelands and Environmental Assistance Program, HQ-Dept of Ecology
Joan Marchioro, State of Washington Office of Attorney General
Brian Walsh, Water Resources Program, HQ-Dept of Ecology
Mark Pacifico, Enforcement Officer, SWRO-Dept. of Ecology
SWRO Files: FERC/Yale Hydroelectric Project

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

IN THE MATTER OF GRANTING A	)	**DRAFT CERTIFICATION-ORDER**
WATER QUALITY CERTIFICATION TO:	)	**NO. DE __WQCR-____**
PacifiCorp, Inc.	)	Licensing of the Yale Hydro-
in accordance with 33 U.S.C. 1341	)	Electric Project (FERC No. 2071),
FWPCA § 401, RCW 90.48.260	)	Clark and Cowlitz Counties,
and WAC 173-201A	)	Washington

TO: Holly Harwood
PacifiCorp
825 NE Multnomah
Portland, OR 97232

On December 2, 2005, PacifiCorp filed an application with the State of Washington Department of Ecology (Ecology) requesting issuance of a certification under the provisions of Section 401 of the Federal Water Pollution Control Act (Clean Water Act) (33 U.S.C. § 1341) to be submitted with its application for a license to the Federal Energy Regulatory Commission (FERC) for the Yale Hydroelectric Project.

1.0 Nature of Project

The Yale Hydroelectric Project (Yale or Project) is one of a total of four hydroelectric projects on the North Fork of the Lewis River (Lewis River). Starting upstream, the projects are Swift No. 1, Swift No. 2, Yale, and Merwin. The Lewis River flows west from the Cascade Mountain Range and its western foothills 93 miles into the Columbia River near the town of Woodland, Washington. Two volcanic peaks, Mount Adams and Mount St. Helens lie on the northern and eastern edges of the basin. The Project is managed for power generation, with a capacity of 134 megawatts and for flood control, recreation, and fish resources.

Yale is located at river mile 34.2 on the North Fork of the Lewis River. Yale includes a 323-foot high, 1,500 foot long concrete dam structure. Adjacent one quarter-mile north of the Yale structure is Saddle Dam which is 40 feet high and 1,600 feet long. Yale Dam forms a 9.8 mile-long reservoir. At full pool, the center of the 18.5-foot diameter intakes to the turbines are 82.4 feet below the surface of the reservoir. Flows are directed through two turbines at the base of the dam. All flow from these turbines enters Lake Merwin.

2.0 Authorities

In exercising authority under Section 401 of the Clean Water Act (33 U.S.C. § 1341) and RCW 90.48.260, Ecology has investigated this application pursuant to the following:

1) Conformance with all applicable water quality-based, technology-based, and toxic or pretreatment effluent limitations as provided under Sections 301, 302, 303, 306, and 307 of the Clean Water Act (33 U.S.C. §§ 1311, 1312, 1313, 1316, and 1317);

2) Conformance with any and all applicable provisions of Chapter 90.48 RCW, including the provision to use all known, available and reasonable methods to prevent and control pollution of state waters as required by RCW 90.48.010; and

3) Conformance with the state water quality standards as provided for in Chapter 173-201A WAC authorized by 33 U.S.C. 1313 and by Chapter 90.48 RCW, and with other appropriate requirements of state law.

3.0 Findings

Background Information About The Project

1) Yale is managed for power generation, with a capacity of 9640 cfs and 134 megawatts, and for flood control, recreation, and fish resources.

2) The 'North Fork' Lewis River watershed is 93 miles long and covers 1050 square miles and ranges in elevation from 12,281 feet above mean sea level (msl) at the summit of Mount Adams to 8 feet msl at the confluence with the Columbia River (RM 87.5) near the town of Woodland, Washington. The majority of the Lewis River basin is forested, with an area of approximately 30 square miles of upper basin denuded by the eruption of Mount St. Helens in 1980.

3) The mainstem of the Lewis River is known as the North Fork Lewis River, and flows southwesterly from its source at Mount St. Helens and Mount Adams through the Swift reservoir to Swift No. 1 Dam (RM 47.9), a canal bypassing the main channel to Swift No. 2 Dam (RM 44), Yale reservoir to Yale Dam (RM 34.2), and Merwin Reservoir to Merwin Dam (RM 19.5). PacifiCorp owns and operates Swift No. 1, Yale, and Merwin Dams. Cowlitz County PUD owns Swift No. 2 Dam, which is operated by PacifiCorp.

4) Construction of Yale Dam began in 1952 and was completed by 1953.

5) Yale Dam typically passes water through its turbines from 6:00 a.m. to 10:00 p.m. and usually does not generate electricity at night.

6) Yale is operated in a coordinated system with these three other hydroelectric projects,

7) Yale Reservoir water elevations are typically held within five feet of approximately 487 feet msl during the months of May to October. Natural inflow and flood control affect winter and spring elevations which range from about 470 to 490 feet msl.

8) Yale does not have structural facilities to allow for upstream migration of fish.

9) The primary fish in the Yale and Merwin reservoirs, are char (bull trout), cutthroat trout, Kokanee, rainbow trout, mountain whitefish, largescale suckers, and other resident fish species. Anadromous fish are not present.

10) A Settlement Agreement was signed on November 30, 2004 and filed with FERC on December 9th, 2004. This agreement represented more than three years of collaboration between 26 parties interested in the Lewis River hydroelectric projects. In this agreement, PacifiCorp and Cowlitz PUD agreed to contribute considerable resources towards the protection, mitigation and enhancement of fish resources, recreation, and aesthetics. Some of the requirements reflected in this Certification-Order are a direct result of the efforts and numerous studies conducted by the parties involved.

2.0 Compliance with Standards

Existing Water Quality: Several water quality studies were performed to assess the existing water quality of the Lewis River hydropower projects. These studies analyzed the water quality characteristics of concern for each stretch of the Lewis River system.

Table 1. Existing Water Quality*

Parameter	Location	Existing Water Quality
Temperature	Yale Dam forebay, Yale Lake	Temperature profile with most pronounced stratification at ~20-25 feet from July through September with bottom temperatures ~8.5°C throughout the year and surface temperatures reaching 23°C in the summer. Little or no stratification seen in winter months.
	Yale Tailrace, Lake Merwin	Water temperatures fluctuated quickly over a 10°C range in the mornings and evenings due to turbine flows when producing power during the day and shutting off flows at night. Temperatures during the day were cold due to deepwater stratified forebay temperatures at the turbine intakes. Warm night time summer temperatures reflect the stratified surface temperatures of Lake Merwin. Changes in temperatures during the summer months dropped ~6°C within a period of one (1) hour and heated 6°C within two hours in the evenings.
TDG	Yale Tailrace	TDG exceedances occurred during turbine power-up and power-down. TDG levels were measured up to 118%. Improved operations have resulted in TDG levels >110%
	Yale Tailrace	Due to the unpredictable and infrequent spills, no information was collected. TDG levels greater than 110% may occur during spills.
pH, conductivity, D/O, turbidity		All meet water quality criteria. D/O fell below 8 mg/L at ~66 feet and below in Yale Lake in September, October, and November.

*Based on:
1. Preliminary Water Quality Study, PacifiCorp Environmental Services July 1995
2.1996-1998 WQ Study found in Final Technical Report, Aquatic Resources, Yale Hydroelectrical Project, March 1999.

3. final Licensee's 2001 Technical Study Status Reports for the Lewis River Hydroelectric Projects, Volume 4, April, 2002

11) Total Dissolved Gas (TDG) exceedances were found to occur below the Yale Dam. These exceedances are a result of operations at Yale. The turbines at Yale were designed to use air to reduce cavitation on the turbine blades as the generators are powering up and powering down during electricity demand cycles at the beginning and end of each day. These exceedances have been corrected by making operational adjustments to reduce the time air is entrained.

12) TDG exceedances could occur below the dam when the dam spills water through the spillway to this reach. However, the large rock block near the end of the spillway acts to reduce air entrainment at depths for a large portion of the water at lower spill volumes. Flows above the 7-day 10 year flood (7Q10) are exempt from the Water Quality Standards (WAC 173 201A-060

(4)(a)). For Yale Dam, these river flows are calculated to be 27,088 cfs. Spills above the hydraulic capacity of the dam and below the 7Q10 flood flow are expected to occur an average of once or twice per year to control reservoir levels during periods of high rain and/or snowmelt.

13) Temperatures in the top ~26 feet of the reservoir near the forebay of the dam were found greater than 18°C in June, July and August. Temperatures below this depth were cooler. This cooler water is released from the deep water intakes into Merwin Reservoir reflects the temperatures of the waters at >70 feet in the forebay. This water is less than 13°C during the summer months.

14) Temperature fluctuations of up to 10°C occur in the tailrace of Yale Dam. This occurs in the mornings when cold, deepwater turbine flows enter the warmer waters of Lake Merwin in the Yale tailrace; and occurs again in the evenings when the turbines shut down, no water enters the tailrace, and the warmer waters of Lake Merwin flow back to the face of the dam.

15) There is reasonable assurance that the other water quality characteristics listed in the water quality standards will be met.

4.0 Conditions

Through issuance of this Certification-Order, Ecology certifies that it has reasonable assurance that the operation of the Yale Dam and activities associated with its continued operation as conditioned will be conducted in a manner that will not violate applicable water quality standards and other appropriate requirements of state law. In view of the foregoing and in accordance with 33 USC § 1341, RCW 90.48.120, RCW 90.48.260, and Chapter 173-201A WAC, this water quality certification is granted to PacifiCorp for the Yale Hydroelectric Project (FERC No. 2071) subject to the conditions within this Certification-Order.

Certification of this Project does not authorize the PacifiCorp to exceed applicable state water quality standards (Chapter 173-201A WAC). Furthermore, nothing in this Certification-Order shall absolve PacifiCorp from liability for contamination and any subsequent cleanup of surface waters, ground waters, or sediments occurring as a result of activities associated with project operations and FERC license conditions.

4.1 General Requirements

1) The project shall comply with all water quality standards (currently codified in ch. 173-201A WAC), ground water quality standards (currently codified in ch. 173-200 WAC), and sediment quality standards (currently codified in ch. 173-204 WAC) and other appropriate requirements of state law. The conditions below set forth adaptive management processes and measures to achieve full compliance with standards and constitute a water quality attainment plan under WAC 173-201A-510(5) for TDG and temperature.

2) In the event of changes or amendments to the state water quality, ground water quality, or sediment standards, or changes in or amendments to the state Water Pollution Control Act (Ch. 90.48 RCW), or changes in or amendments to the Clean Water Act, such provisions, standards, criteria or requirements shall apply to this project and any attendant agreements, orders or permits.

3) Discharge of any solid or liquid waste to the waters of the state of Washington without approval from Ecology is prohibited.

4) PacifiCorp shall obtain Ecology review and approval before undertaking any change to the project or project operations that might significantly and adversely affect the water quality or compliance with any applicable water quality standard (including designated uses) or other appropriate requirement of state law.

5) This Certification-Order does not exempt compliance with other statutes and codes administered by federal, state, and local agencies.

6) The Washington State Department of Fish and Wildlife (WDFW) requires a Hydraulic Project Approval (HPA) (under 75.20 RCW) for work in waters of the State. PacifiCorp shall obtain a HPA from WDFW for any activities that require a HPA, prior to the beginning of those activities, and must comply with all conditions of the applicable HPA. To ensure compliance with HPA requirements, persons planning to conduct work under a Corp of Engineers nation-wide permit must contact WDFW at: Washington Department of Fish and Wildlife, 600 Capitol Way North, Olympia, WA 98501-1091, (360)902-2200. For further information on HPA requirements and WDFW contacts, visit the following respective web pages: http://www.wdfw.wa.gov/hab/hpapage.htm, http://www.wdfw.wa.gov/depinfo.htm.

7) Ecology retains the right, by further order, to modify schedules or deadlines provided under this Certification-Order or provisions it incorporates.

8) Ecology retains the right by Order to require additional monitoring studies or measures if it determines there is likelihood that violations of water quality standards or other appropriate requirements of state law have or may occur, or insufficient information exists to make such determination.

9) Ecology reserves the right to amend this Certification-Order if it determines that the provisions hereof are no longer adequate to provide reasonable assurance of compliance with applicable water quality standards or other appropriate requirements of State law. Any such amended Certification-Order shall take effect immediately upon issuance, unless otherwise provided in the amended Certification-Order, and may be appealed to the Pollution Control Hearings Board (PCHB) under ch. 43.21B RCW.

10) Ecology reserves the right to issue orders, assess or seek penalties, and to initiate legal actions in any court or forum of competent jurisdiction for the purposes of enforcing the requirements of this Certification-Order.

11) The conditions of this Certification-Order shall not be construed to prevent or prohibit PacifiCorp from either voluntarily or in response to legal requirements imposed by a court, the FERC, or any other body with competent jurisdiction, taking actions which will provide a greater level of protection, mitigation, or enhancement of water quality or of existing or designated uses.

12) If five (5) or more years elapse between the date this Certification-Order is issued and issuance of the new FERC license for the Project, this Certification-Order shall have deemed to be expired and denied at such time and PacifiCorp shall send Ecology an updated application for a Clean Water Act Section 401 Certification that reflects then current conditions, regulations and technologies. This provision shall not be construed to otherwise limit the reserved authority of Ecology to withdraw, amend, or correct the Certification-Order before or after the issuance of a FERC license.

13) This Certification-Order may be modified or withdrawn by Ecology prior to the issuance of the license based upon significant new information or changes to water quality standards or appropriate requirements of state law.

14) Copies of this Certification-Order and associated permits, licenses, approvals and other documents shall be kept on the Project site and made readily available for reference by PacifiCorp, its contractors and consultants, and by Ecology.

15) PacifiCorp shall allow Ecology access to inspect the project and project records required by this Certification-Order for the purpose of monitoring compliance with its conditions. Access shall occur after reasonable notice, except in emergency circumstances.

16) PacifiCorp shall, upon request by Ecology, fully respond to all reasonable requests for materials to assist Ecology in making determinations under this Certification-Order and any resulting rulemaking or other process.

17) Any work that is out of compliance with the provisions of this Certification-Order, or conditions that result in distressed, dying or dead fish, or any discharge of oil, fuel, or chemicals into state waters, or onto land with a potential for entry into state waters, or turbidity greater than 5 NTU over background is prohibited. If these conditions occur, PacifiCorp shall immediately take the following actions:

a) Cease operations at the location of the violation to the extent such operations may reasonably be causing or contributing to the problem.

b) Assess the cause of the water quality problem and take appropriate measures to correct the problem and/or prevent further environmental damage.

c) Notify Ecology of the failure to comply. Oil or chemical spill events shall be reported immediately to Ecology's 24-Hour Spill Response Team at 800 258-5990 within 24 hours. Other non-compliance events shall be reported to Ecology's Federal Permit Manager at 800 424-8802.

d) Submit a detailed written report to Ecology within five (5) days that describes the nature of the event, corrective action taken and/or planned, steps to be taken to prevent a recurrence, results of any samples taken, and any other pertinent information.

e) Observed violations at the project shall be highlighted in the annual monitoring report.

Compliance with these requirements does not relieve PacifiCorp from responsibility to maintain continuous compliance with the terms and conditions of this Certification-Order or the resulting liability from failure to comply.

18) The project shall meet the Class A narrative standards and protect the beneficial uses listed in WAC 173-201A-030.

4.2 Total Dissolved Gas (TDG*)*

1) The project shall not cause any exceedance of the TDG water quality criteria as specified in WAC 173-201A 030 (2)(c)(iii) and 173-201A-060 (4)(a) and (b) in any waters of the state, including all waters of the Project.

2) If the water quality criteria for TDG is modified over the term of the license, such modified criteria shall apply to this Project.

3) PacifiCorp shall operate Yale Dam to minimize the TDG associated with air-injected to turbine flows to within 110% TDG.

a) PacifiCorp shall continue to perform water quality monitoring in turbine water below Yale Dam for turbine air injection generated TDG.

4) PacifiCorp shall manage spill to minimize TDG production to within 110% saturation.

a) PacifiCorp shall monitor spill water during spill events as specified in the monitoring plan in Exhibit B.

b) Within six (6) months of the discovery of any exceedance of the 110% TDG criterion caused by spill, PacifiCorp shall submit to Ecology for review and approval a TDG Water Quality Attainment Plan (TDG WQAP). The TDG WQAP plan shall include:

i. A description of standard Project operations with regard to minimizing TDG associated with spills;

ii. A description of how the Project will minimize all spills that produce TDG exceedances at the Project;

iii. An evaluation of all potential structural and operational improvements to minimize TDG production and preferred alternatives;

iv. A timeline showing when operational adjustments will occur; and

v. A schedule for construction.

d) The Project shall operate according to the approved TDG WQAP with the objective of eliminating TDG exceedances.

e) Upon approval of the TDG WQAP, PacifiCorp shall immediately begin the necessary steps identified in the TDG WQAP (if any) to modify the dam structure to eliminate TDG exceedances.

f) If monitoring to test the effectiveness of gas abatement controls implemented through the TDG WQAP shows the TDG abatement measures identified in the Plan and subsequently employed are not successful in meeting the water quality criterion within the first ten (10) years of discovery of TDG criterion exceedances caused by spill, Ecology will require further activities to meet water quality criterion.

5) Strict compliance with meeting the 110% TDG criteria is waived when flows in the Lewis River exceed the rate equivalent to the 7Q10 flows as defined in WAC 173-201A-060(4)(a). At the writing of this certificate, the controlled 7Q10 flow for the Lewis River at Yale Dam is 27,088 cfs. PacifiCorp or Ecology may request to reassess and modify the established 7Q10 flow; any modified flow shall be implemented following approval by Ecology.

For a controlled 7Q10 flow to qualify for the TDG exemption, it must be accompanied by a large storm event that provides an equivalent amount of water to the drainage basin. Calculations show that this is equivalent to ___ inches per 24-hour period in the vicinity of the Project. It is recognized that spills are often required in anticipation of or after a 7Q10 storm event. For this project, the TDG exemption will be extended to include the 48-hour period prior to and after any qualifying 7Q10 storm event. Allowance for this 48-hour extension encourages emergency spills of longer duration that produce lower levels of TDG. It is preferred to produce lower levels of TDG over a longer duration rather than produce high, potentially acutely-toxic levels of TDG over a shorter duration.

Additionally, elevated TDG levels formed during qualifying 7Q10 events at Swift No. 1 are often observed several days later at Yale Dam forebay. This observed spike of TDG at the Yale Dam forebay shall not be considered a TDG criteria exceedance if it was formed during a qualifying 7Q10 event at Swift No. 1.

6) During high flows, including those greater than the 7Q10, PacifiCorp shall manage spill levels to minimize TDG production.

7) PacifiCorp shall include gas abatement measures during any design and removal of the rock mass in the spillway.

a) The spillway shall not increase TDG entrainment. The spillway shall, if prior monitoring detects TDG production from the project's spill greater than 110% decrease TDG production.

b) Continuous monitoring of TDG production during spills shall occur prior to any rockwork. This monitoring must collect information from spills that are close to 7Q-10 conditions.

PacifiCorp shall send results of this monitoring to Ecology SWRO within six (6) months of monitoring.

c) Continuous monitoring shall be be performed during the spills immediately, following rockwork and other associated structural work. Monitoring must also collect information from spills close to the 7Q-10 conditions. Send monitoring results to Ecology SWRO within six months of the spill event.

4.3 Temperature

1) The Project shall not cause any violation of the temperature water quality criteria as specified for Lake Class waters in WAC 173-201A-030(5) in Lake Merwin and Yale Lake. If the presence or operation of the dam causes violation of these criteria, PacifiCorp shall modify its operation to the extent necessary to ensure that the Project does not cause such exceedance. The Lake Class temperature criterion that applies to the reservoirs mandates no measurable change from natural conditions.

2) Downstream Discharge Compliance Schedule. Large temperature fluctuations in the Yale tailrace/upper end of Lake Merwin are due to the operation of Yale Dam. These temperature fluctuations are exacerbated due to the stratification in Lake Merwin. There may be some opportunities to reduce temperature fluctuation at the upper end of Lake Merwin through operational and structural modifications at Yale in conjunction with adjustments at Merwin Dam.

   a) PacifiCorp shall develop a Temperature Water Quality Attainment Plan (TWQAP) for the Yale tailrace/Upper Merwin Reservoir that, in accordance with WAC 173-201A-510(5), provides a detailed strategy for maintaining the highest attainable water quality condition to best protect the biota with respect to temperature that is feasible to achieve. The plan shall identify and evaluate potential reasonable operational and structural changes to decrease temperature fluctuation in the upper reservoir/Yale tailrace. Any changes that would conflict with other conditions of this Certification-Order require prior approval by Ecology. The plan shall also identify the temperature regime that is feasibly achievable, such that the temperature in the discharge is protected to the highest degree feasible. A Responsiveness Summary shall be incorporated into the TWQAP that evaluates the effectiveness of the modifications (if any) and identifies follow-up studies and actions that can be performed to further improve temperature based on the initial findings.

   b) A draft of the TWQAP shall be submitted to Ecology within one (1) year of license issuance. The TWQAP must include a reasonable compliance schedule for carrying out an adaptive process for evaluating feasible technical and operational changes that will improve water quality protection within ten (10) years of license renewal. This process may include modeling and physical testing of operational changes, and modeling changes in structural revisions and testing those structural revisions that can reasonably be implemented within the ten year period. Significant structural or operational revisions that may impose potentially unreasonable costs or create potentially unreasonable societal effects may be evaluated as part of a formal Use Attainability Analysis consistent with the federal and state water quality regulations after the ten year compliance period has ended.

3) PacifiCorp shall monitor for temperature in the forebay and tailrace of Yale Dam as well as any monitoring required in the TWQAP.

4) If water quality criteria for temperature are modified over the term of the license, such modified criteria shall apply to this project. Exhibit B details how the existing criteria shall be applied to the Yale project, its reservoir, and its tailrace discharges. If the presence or operation of the dam

causes water temperature in the tailraces to violate the criteria, PacifiCorp shall modify its operation to the extent necessary to ensure that the Project does not cause such violation.

4.4 Construction Projects and Habitat Modifications

The following applies to all in-water or near-water construction work related to the project that can impact surface- or ground-water quality. This includes, but is not limited to, construction, operation, and maintenance of fish collection structures, generation turbines, penstocks, hatcheries, transportation facilities, portable toilets, boat ramps, access roads, transmission corridors, structures, and staging areas. This also includes silviculture-related activities and emergencies for all activities related to project operation.

1) If water quality exceedances are predicted as being unavoidable during construction or maintenance of a project, a short-term modification must be applied for in writing to Ecology at least three (3) months prior to Project initiation. If any Project has a long-term impact on a regulated water quality parameter, characterization monitoring must be performed for the impacted parameter(s), and a monitoring plan must be outlined in the Water Quality Protection Plan discussed below. This may require additional management practices to minimize impacts over the license period.

2) A Water Quality Protection Plan (WQPP) shall be prepared, and followed, for all project-related work that is in- or near-water that has the potential to impact surface- and/or groundwater quality. The WQPP shall include control measures to prevent contaminants from entering surface water and groundwaters, and shall include, but not be limited to, the following elements:

   a) Stormwater Pollution Prevention Plan (SWPPP). The SWPPP shall specify the Best Management Practices (BMPs) and other control measures to prevent contaminants entering the Project's surface water and groundwaters. The SWPPP shall address the pollution control measures for PacifiCorp's activities that could lead to the discharge of stormwater or other contaminated water from upland areas. The SWPPP must also specify the management of chemicals, hazardous materials and petroleum (spill prevention and containment procedures), including refueling procedures, the measures to take in the event of a spill, and reporting and training requirements.

   b) In-Water-Work Protection Plan. The In-Water-Work Protection Plan shall be consistent with the SWPPP and shall specifically address the BMPs and other control measures for PacifiCorp activities that require work within surface waters. In addition to construction projects, this work includes, but is not limited to, the application of herbicides, pesticides, fungicides, disinfectants, and lake fertilization. Turbidity and dissolved oxygen shall be monitored upstream of the location where in-water construction is taking place and at the point of compliance (as defined in WAC 173 201A-110(3)(a-d)) during construction. Samples shall be taken at a minimum of once each day during construction in or adjacent to any water bodies within the Project area that may be affected by the construction. The In-Water-Work Protection Plan shall include all water quality protection measures consistent with a HPA for the project.

   c) The WQPP shall include procedures for monitoring water quality, actions to implement should a water quality exceedance occur, and procedures for reporting any water quality violations to Ecology. The WQPP shall include all water quality protection measures consistent with a HPA for the Project. The WQPP shall be submitted to Ecology for review and approval at least three (3) months prior to project initiation, and a copy of the WQPP shall be in the possession of the on-site construction manager, and available for review by Ecology staff, whenever construction work is under way.

d) When construction project meet the coverage requirements of the NPDES and State Waste Discharge General Permit for Stormwater Discharges Associated with construction activity, PacifiCorp is required to apply for this permit and to comply with the terms and conditions of the permit.

3) Best Management Practices

a) Work in or near the reservoir, water within the dam, the river, or any wetlands shall include all reasonable measures to minimize the impacts of construction activity on waters of the state. Water quality constituents of particular concern are turbidity, suspended sediment, settleable solids, oil and grease, and pH. These measures include use of Best Management Practices (BMPs) to control erosion and sedimentation, proper use of chemicals, oil and chemical spill prevention and control, and clean-up of surplus construction supplies and other solid wastes.

b) During construction, all necessary measures shall be taken to minimize the disturbance of existing riparian, wetland or upland vegetation.

c) All construction debris shall be properly disposed of on land so that it cannot enter a waterway or cause water quality degradation to state waters. Retention areas or swales shall be used to prevent discharging of water from construction placement areas.

d) PacifiCorp shall ensure that any fill materials that are placed for the proposed improvements to habitat in any waters of the state do not contain toxic materials in toxic amounts.

4) Maintain Turbidity Standards

a) Certification of this project does not authorize PacifiCorp to exceed the turbidity standard for Class A waters beyond the mixing zone described below. Turbidity in Class A waters shall not exceed 5 NTU over background turbidity when turbidity is 50 NTU or less, or have more than a 10 percent increase in turbidity when the background turbidity is more than 50 NTU.

b) Consistent with WAC 173-201A-100(7) and –110(3), a mixing zone is established within which the turbidity standard is waived. The mixing zone is established to allow only temporary exceedances of the turbidity criteria during and immediately after in-water work. The temporary turbidity mixing zone shall be as follows:

i. For waters up to 10 cfs flow at the time of construction, the point of compliance shall be 100 feet downstream from activity causing the turbidity exceedance.

ii. For waters above 10 cfs up to 100 cfs flow at the time of construction, the point of compliance shall be 200 feet downstream from activity causing the turbidity exceedance.

iii. For waters above 100 cfs flow at the time of construction, the point of compliance shall be 300 feet downstream from activity causing the turbidity exceedance.

5) The above conditions do not relieve PacifiCorp from needing to obtain all the applicable permits such as NPDES pemits, shoreline permits and HPAs.

4.5 Oil Spill Prevention and Control

1) No oil, fuel, or chemicals shall be discharged into waters of the state, or onto land with a potential for entry into waters of the state as prohibited by Ch. 90.56 RCW.

2) Contain and remove from the water, visible floating oils released from construction or Project operation.

a) In the event of a discharge of oil, fuel or chemicals into state waters, or onto land with a potential for entry into state waters, immediately begin and complete containment and

clean-up efforts, taking precedence over normal work. Clean-up shall include proper disposal of any spilled material and used clean-up materials.

b) Do not use emulsifiers or dispersants in waters of the state without prior approval from Ecology, Southwest Regional Office.

c) Do not use emulsifiers or dispersants in waters of the state without prior approval from Ecology, Southwest Regional Office.

d) Within three (3) months of receiving the license from FERC, establish an Ecology-approved on-site spill cleanup material inventory. Maintain this on-site inventory and a complete inventory list.

e) Project Operators shall be familiar with and trained on use of oil spill cleanup materials. In the event of an oil spill, properly dispose of used/contaminated materials and oil and as soon as possible restock new supplies. Include records of proper disposal in the oil consumption records and keep copies of disposal records of contaminated cleanup supplies on-site for inspection.

f) Ensure that operational work boats and trained boat operators are available at the project. Install mechanisms as appropriate to safely launch or lower work boats into areas where work boats would be deployed in the event of an oil spill. These mechanisms must be pre-approved by Ecology.

g) Keep SPCC Plans as required and historical spill records on-site. Provide these to Ecology immediately upon request.

h) Identify and map floor drains. Post these maps at the Project in a conspicuous location for use by Operators and other personnel in the event of an oil spill. Seal floor drains that are no-longer needed.

i) Install stair cases, permanent ladders, etc. allowing for oil spill response staff to safely reach areas that could, in the event of an oil spill, need to be accessed to deploy sorbent pads and boom materials.

3) Oil-Water Separators (OWS)

a) By the time of issuance of the FERC license, have a maintenance plan for the OWS. This maintenance plan must include a process to periodically test the oil-stop valves and insure quality assurance that they will work as designed.

b) OWS shall only admit rain and water run-off originating in the containment area that is intended to drain into the OWS.

c) Perform periodic and appropriate maintenance and inspection on a schedule to include cleaning of sediment.

d) Clean and service the OWS in the event of an oil spill incident where oil is introduced into the OWS.

e) Evaluate each OWS for inflows to account for the total volume of all transformers located in the containment area plus 10 per cent. Verify and conduct corrective action that if a failure of all containers in the containment area occurs during a major rain event, insure that oil would not be “washed through” the OWS during such an event.

4) Transformers:

a) Transformer deck containment area surfaces must be impervious. Conduct periodic inspections and re-surfaced areas, fill cracks, caulk metal plate footings or otherwise ensure that containment areas will contain all spill fluids.

b) Obtain pre-approval from Ecology before breaching containment areas for reasons other than containment area maintenance.

c) Remove oil from transformers prior to moving them from the transformer containment area.

d) Snowy or icy conditions require daily inspections of transformer deck containment area including an inspection of the drains leading to the OWS for freeze-up conditions. Inspect the condition of the transformers and the transformer cooling system to insure that water pipes do not break and cause an oil leak or spill. Water cooled transformers that are off-line must have the cooling systems properly secured at the time of transformer decommissioning, regardless of the season or time of year to insure that in the event of freezing weather, the cooling systems will not freeze-up and cause a transformer oil leak or spill. Remove any observed rain water pooling in the containment areas.

5) Sumps:

a) Locate oil sensors on the surface of the water in each sump in addition to the oil sensors located at the bottom of each pumping cycle. Inspect and test these sensors every three (3) months or soone r if needed to insure that they will work as designed. Include in the inspection provisions to verify that the oil sensors located at the bottom of each pumping cycle are properly placed at the proper level. Visually inspect all of these areas each week or immediately if oil is suspected to be present such as in the event of an oil sensor alarm or the observance of an oil or grease spill in the turbine pit of sufficient volume to reach the sump. Any oil detected in the sumps requires immediate cleanup and Emergency Management Division (EMD) and National Response Center (NRC) notification.

b) Immediately repair oil leaks in the turbine pit that are of sufficient volume to can reach the sump and that can not be placed under a containment pan. Immediately repair water leaks located in the turbine pit area that are leaking at a volume of greater than one (1) gallon per hour.

c) Install hand rails and mechanisms so the sump covers can be removed for a visual inspection of the sump. Provide water-proof lighting in the sumps or spotlights adequate to view the surface water in the sumps. Provide a mechanism to satisfactorily deploy and recover sorbent boom in the sumps at each project.

6) Oil, fuel and chemical storage containers, containment areas, and conveyance systems:

a) Provide proper containment around each storage container (including transformers) or around a combination of storage containers as appropriate and agreed upon by Ecology. Proper containment equals the volume of the container plus 10 per cent.

b) Recalculate required containment areas to insure proper containment still exists after major equipment changes. Example: when converting from water cooled transformer to an air cooled unit, re-calculate oil volume and compare to containment area. Calculate containment volumes from *maximum* storage volumes, not normal oil level volumes.

c) Provide external oil level gauges for governor oil tanks, transformers and other oil tanks that contain over 100-gallons of oil. Provide appropriate level markings for these gauges. Provide a sign or other means at each tank, near the tank level gauge, that describes these level markings and the relationship of each inch vs. how many gallons (in the case of a glass tube type of gauge). Dial gauges must also describe oil volume in gallons or have a sign or other means provided at each reservoir that adequately describes dial movement in relation to gallons. Provide a sign or other indication that shows ¼, ½, ¾, and full gauge readings or indications in gallons. If equipment must be placed in a special mode of

operation, prior to level observance, this must also be posted. Example: wicker gate ram position or other hydraulic ram positions, prior to oil level reading.

d) Regularly check all fuel hoses, oil drums, oil or fuel transfer valves and fittings, etc, for drips or leaks. Maintain and properly store them to prevent spills into state waters.

e) Do not refuel equipment within 50 feet of rivers, creeks, wetlands, or other waters of the state.

f) When working on transformers and other equipment that might spill or drip oil provide full oil spill containment capacity plus 10 per cent.

g) Inspect containers once per week. Maintain container Inspection sheets to include: maximum container volume and an exact reading recording of the oil level by the staff/operator conducting the inspection. Weekly inspection readings must be consistent; provide training to the staff/operator to ensure consistent and accurate readings.

h) Keep oil consumption records maintained on-site; provide these records to Ecology immediately upon request.

i) In the event that the project modifies the oil transfer operation to include hard-plumbing to reservoirs such as the governor oil tank from the oil tank room, or other extensive modifications, Ecology notification and approval of such modification must be conducted.

j) Contain wash water containing oils, grease, or other hazardous materials resulting from wash-down of equipment or working areas for proper disposal, and do not discharge this water into state waters.

7) Other:

a) Maintain site security at the project site to reduce chance of oil spills.

b) Initiate, plan for, document, and train staff for the deployment of General Response Plan and boom strategies for each project. Review and update as needed annually.

4.6 Herbicide / Pesticide / Fertilizer Applications

1) Prior to the use of herbicides, pesticides, fungicides, disinfectants, fertilizers, or algicides in waters of the state, coverage under the current Aquatic Pesticides Permit shall be obtained, and conformance with any other applicable state requirement such as SEPA, shall be attained.

2) BMPs and other control measures for the application of herbicides, pesticides, fungicides, disinfectants, fertilizers, or algicides must be addressed in an In-Water-Work Protection Plan. An appropriate water quality monitoring plan shall be developed prior to the application and shall be implemented for all related work.

3) Prior to the use of herbicides, pesticides, disinfectants, fertilizers, or algicides adjacent to waters of the state, PacifiCorp shall follow BMPs to avoid the entry of such materials into waters of the state. Applicable BMPs include, but are not limited to, such actions as hand application and avoiding drift of materials into the water.

4.7 Monitoring and Reporting

1) The Water Quality Monitoring Plan (WQMP) PacifiCorp prepared for the FERC as part of the license application process is incorporated as a requirement of this Certification-Order. And shall be followed except as further modified by the Certification-Order. Within one (1) month of issuance of this Certification-Order, PacifiCorp shall submit to Ecology for its review and approval a revised WQMP incorporating any additional monitoring requirements set forth in this Certification-Order.

2) Monitoring pursuant to the WQMP shall begin as soon as practicable and in no event shall monitoring begin any later than one (1) year after issuance of this Certification-Order. An exception to the one (1) year requirement may be made for TDG during spill. In this case, PacifiCorp must begin monitoring during the first spill event after the Certification-Order is issued.

3) Representative water quality measurements shall be made for the parameters listed in Table 2 at the identified locations and frequencies.

Table 2. Water Quality Monitoring Schedule

Parameter	Location	Depths (ft)	Frequency	Duration
Total Dissolved Gas (TDG)	Yale Dam Turbine Outlets	15	Hourly	Ongoing
	Yale tailrace downriver of aeration zone (1)	~10-15	During spill events: Hourly, 24 hrs before to 48 after event	Ongoing unless TDG during spill is found not to exceed 110% at river flows approaching 27,088 cfs
	Yale Forebay	1, 5, 10, 20 40, 60, 100, 200	May 1–Oct 31: Hourly	Ongoing
	Yale Dam Turbine Outlets	15	Hourly all year	Ongoing
Temperature fluctuations do to power loading	Yale Dam Tailrace*	Profile*	Hourly	10 years
Oil & Grease	Record amounts of oil, grease and hydraulic fluids used	n/a	Weekly	Ongoing for the term of the license

* Yale Dam tailrace temperature monitoring plan to be approved by Ecology per Temperature per conditions 4.3, 2 & 3.

4) All water quality monitoring shall meet accepted standards for data quality. The WQMP shall include monitoring and data evaluation procedures and objectives that ensure data quality. Data quality procedures shall be consistent with United States Environmental Protection Agency and Ecology guidance on this subject.

5) The WQMP shall be updated annually by amendment to reflect any changes in monitoring parameters, schedule, or methodology. These amendments, or a notification of no change, shall be sent to Ecology for review and approval by December 1st of each year. Ecology will provide its revisions and approval for the WQMP within three (3) months after receipt of an amendment or notification.

6) Data from all water quality monitoring shall be summarized and reported in a format approved by Ecology and submitted annually. Report shall include sample dates, times, locations, and results. Any violations of state water quality standards shall be highlighted. The report shall be submitted by March 1st of the year following the collection of the data. Data reports shall be submitted to Ecology's, Water Quality Program, Southwest Regional Office.

7) PacifiCorp may request to modify or eliminate parts of the monitoring program after a minimum of five (5) years of reliable data collection following issuance of the new license. Modifications to this monitoring schedule can be requested by submitting to Ecology reasons for the modifications along with a modified Water Quality Monitoring Plan.

8) A more rigorous water quality sampling program for the listed parameters or additional parameters may be required by Ecology if necessary to protect water quality in the future based on monitoring results, regulatory changes, changes in project operations and/or requirements of TMDLs, or to otherwise provide reasonable assurance of compliance with state water quality standards.

5.0 Order

Any person who fails to comply with any provision of this Certification-Order shall be liable for a penalty of up to twenty thousands dollars per day under the Clean Water Act and under the state Water Control Act, for a penalty of up to ten (10) thousand dollars for each day of continuing noncompliance or such other amount as may be authorized under state law as exists now or may be amended during the term of the license.

6.0 Appeal Process

You have the right to appeal this Order to the Pollution Control Hearings Board. Pursuant to chapter 43.21B RCW, your appeal must be filed with the Pollution Control Hearings Board, and served on the Department of Ecology within thirty (30) days of the date of your receipt of this document.

To appeal this Order, your notice of appeal must contain a copy of the Ecology Order you are appealing.

Your appeal must be filed with:

The Pollution Control Hearings Board
4224 – 6th Avenue SE, Rowe Six, Bldg. 2
P.O. Box 40903
Lacey, Washington 98504-0903

Your appeal must also be served on:

The Department of Ecology
Appeals Coordinator
P.O. Box 47608
Olympia, Washington 98504-7608.

In addition, please send a copy of your appeal to:

Federal Permit Appeals Coordinator
Department of Ecology
P.O. Box 47600
Olympia, Washington 98504-7600

For additional information: Environmental Hearings Office Website: http://www.eho.wa.gov

Your appeal alone will not stay the effectiveness of this Order. Stay requests must be submitted in accordance with RCW 43.21B.320. These procedures are consistent with Ch. 43.21B RCW.

DATED this ___ day of MONTH 2006 at Olympia, Washington.

_____

Kelly Susewind
Water Quality Section Manager
Southwest Regional Office
Department of Ecology
State of Washington

Exhibit A – Definitions

7Q-10 – The high flow that is calculated to occur only once, for 7 consecutive days during any 10-year period.

BMPs – Best Management Practices to reduce pollution

CWQPP - Construction Water Quality Protection Plan – necessary for all construction projects in, over, or near water.

FERC - Federal Energy Regulatory Commission

FWPCA – Federal Water Pollution Control Act

HPA – Hydraulic Project Approval

IWPP – In Water Work Protection Plan. Part of the CWQPP as described above. This is for work in the water—such as boat ramps or cement work in the water. This does not apply inside the dam when before beginning the project, the water can be completely removed**.**

MSL – Mean Sea Level

NTU – Nephelometric Turbidity Units

RCW – Revised Code of Washington

RM – River Mile

SWPPP – Stormwater Pollution Prevention Plan –Part of the CWQPP as described above. This is to prevent polluted stormwater from entering the reservoir or river.

TDG – Total Dissolved Gas

TMDL – Total Maximum Daily Loa**d**

USC - United States Code

USDA-FS - Forest Service of the United States Department of Agriculture

USGS – United Stated Geological Survey

USFWS - United States Fish and Wildlife Service

WAC – Washington Administration Code

WQAP—Water Quality

WQMP – Water Quality Monitoring Plan

WDFW - Washington Department of Fish and Wildlife

WQS – Water Quality Standards Rule, WAC 173 201A. For further descriptions of terms, refer to the definitions in this rule.